

DETAILED DESCRIPTION OF THE DRAWINGS

The invention will now be further described, by way of example, with reference to the following drawings in which:

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^(a-b)
Figure 1~~1~~ shows perspective views of a test device in accordance with a first embodiment of the present invention;

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^(a-b)
Figure 2~~1~~ shows horizontal sectional views through the device of Figure 1a, along the line C-C of Figure 4) with the sealing means extended and retracted;

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^(a-b) ^(a-b)
Figures 3~~1~~ and 4~~1~~ show vertical sectional views along the lines A-A and B-B respectively of Figure 2;

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^(a-c) ^(a-c)
Figures 5~~1~~ and 6~~1~~ show vertical sectional views corresponding to those of Figures 3 and 4 respectively, but with the transport member progressively rotated;

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^(a-c)
Figure 7~~1~~ shows respective sectional views along the lines E-E, F-F and G-G of Figures 5 and 6;

Figure 8 shows perspective views of a test device in accordance with a second embodiment of the present invention;

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Figure 9 is a top plan view of the test device of Figure 8a;

Figure 10 is a sectional view along the line A-A of Figure 9;

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Figure 11 is a sectional view along the line B-B of Figure 10;

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(a-c)
~~(a-d)~~

Figures 12₁ shows sectional views corresponding to that of Figure 10, with the transport member at different rotational positions;

(a-d)

Figures 13₁ shows top plan views similar to Figure 9, with a test strip in different positions during the course of a test measurement;

(a-b)

10 Figures 14₁ shows perspective views of a test device in accordance with a third embodiment of the present invention;

15 Figure 15 is a top plan view of the test device of Figure 14a;

Figure 16 is a sectional view along the line A-A of Figure 15;

20 Figure 17 is a sectional view along the line B-B of Figure 16;

(a-e)

25 Figures 18₁ shows sectional views corresponding to that of Figure 16, with the transport member at different rotational positions;

(a-c)

Figures 19₁ shows top plan views similar to Figure 15, with a test strip in different positions during the course of a test measurement;

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Figure 20 is a top plan view of a test strip in a preferred embodiment of the invention;

35 Figures 21 to 24 are sectional views through part of a further alternative embodiment, showing the operation of a sliding stop member;

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(a-f)

Figures 25 shows sectional views through a device in accordance with an embodiment of the invention, showing operation of a magazine ratchet mechanism;

(a-f)

5 Figures 26 shows sectional views along the line A-A in Figure 25;

~~Figures 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39~~ 27-28, 29(a-c) and 30-39

10 Figures 27 to 39 are perspective views showing a test device in accordance with another embodiment of the invention and its assembly.

DETAILED DESCRIPTION

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In the embodiment illustrated in Figures 1 to 7, a test device for measuring glucose concentration in blood comprises a housing 2 which houses a stack of test strips 16 in a magazine 18. A transport member 4 (in this example, a feed barrel which is circular in cross section) is rotatably mounted in an opening of the housing 2 and has an axis of rotation which spans the opening. As will be described below, the feed barrel 4 has a recessed portion 12 which receives and transports a single test strip 16 from the stack in the magazine from a start position (Figure 1a) to an engagement location (Figure 1b) where electrode tracks 50 on the test strip engage with electrical contacts mounted in the housing and connected to a meter. With the test strip 16 in the engagement location a user can apply a drop of blood to the working area 42 of the test strip 16. The housing has mounted thereon a meter comprising a PCB 6 and display means 8 (in this example, an LCD) for displaying a readout of blood glucose concentration. Glucose concentration values from previous samples can be retained and displayed by operation of a memory button 10 on the PCB. Further rotation of the feed barrel 4 brings the used test strip 16 to an opening 14 in the housing 4 through which the test strip can be ejected or removed.